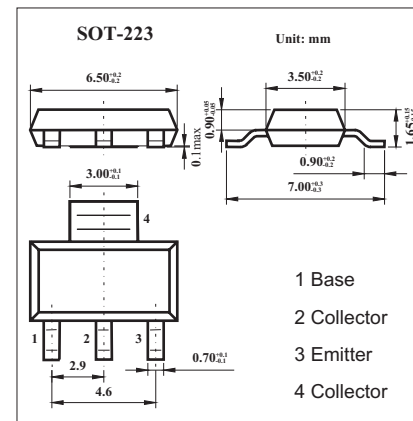


NPN Switching Transistor

KZT2222A

■ Features

- High current (max. 600 mA)
- Low voltage (max.40 V).



■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector-base voltage	V _{CBO}	75	V
Collector-emitter voltage	V _{CEO}	40	V
Emitter-base voltage	V _{EBO}	6	V
Collector current	I _C	600	mA
Peak collector current	I _{CM}	800	mA
Peak base current	I _{BM}	200	mA
Total power dissipation Ta ≤ 25°C	P _{tot}	1	W
Storage temperature	T _{stg}	-65 to +150	°C
Junction temperature	T _j	150	°C
Operating ambient temperature	T _{amb}	-65 to +150	°C
Thermal resistance from junction to ambient	R _{th(j-a)}	109	K/W
Thermal resistance from junction to soldering point	R _{th(j-s)}	28	K/W

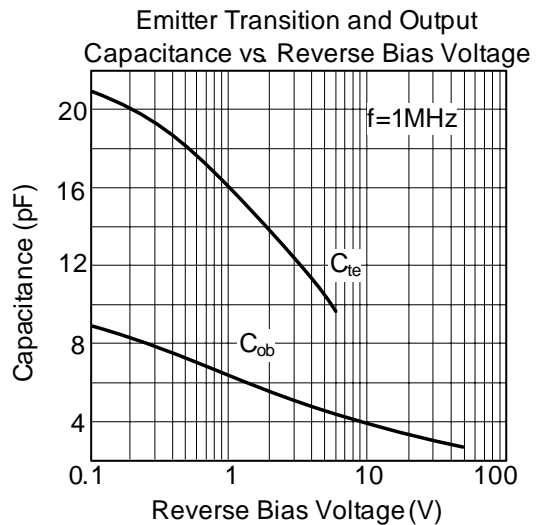
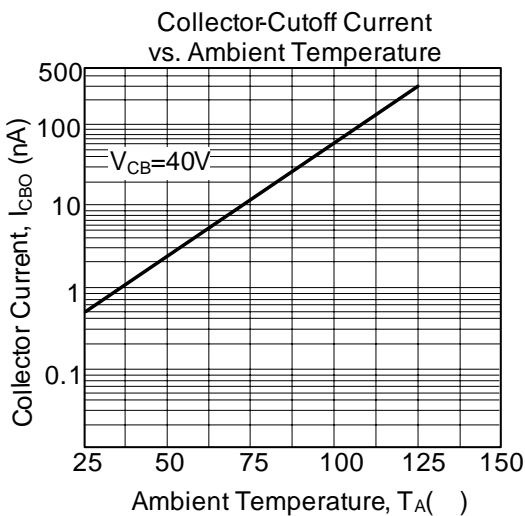
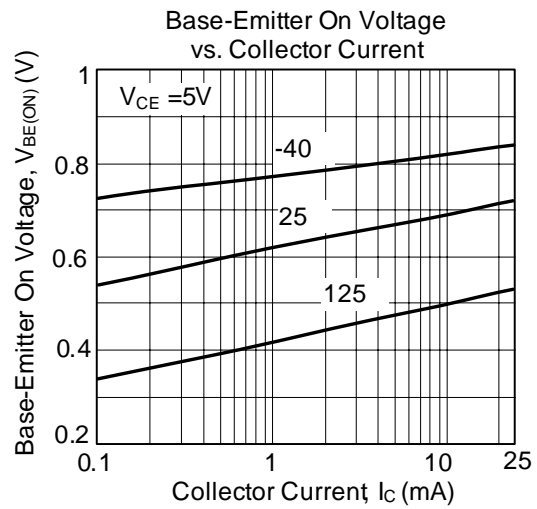
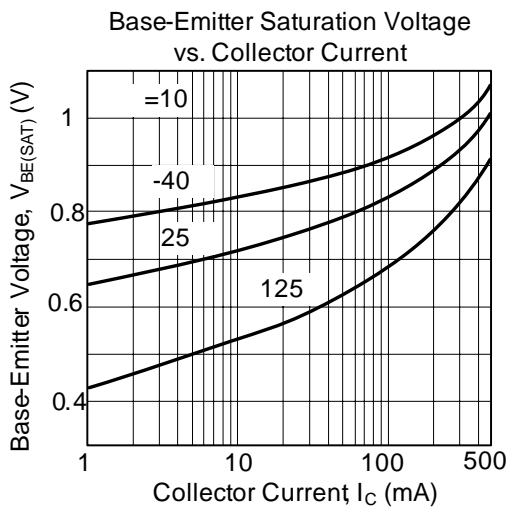
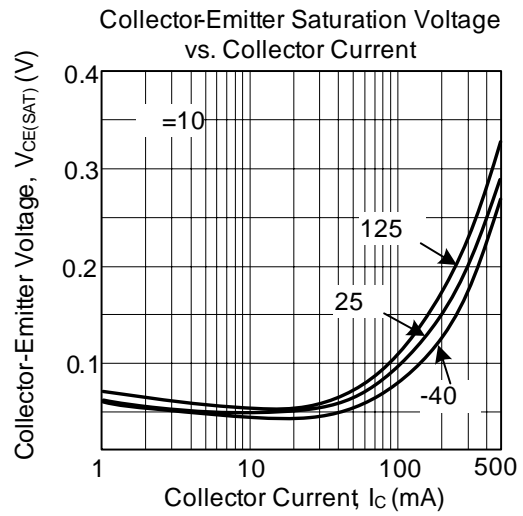
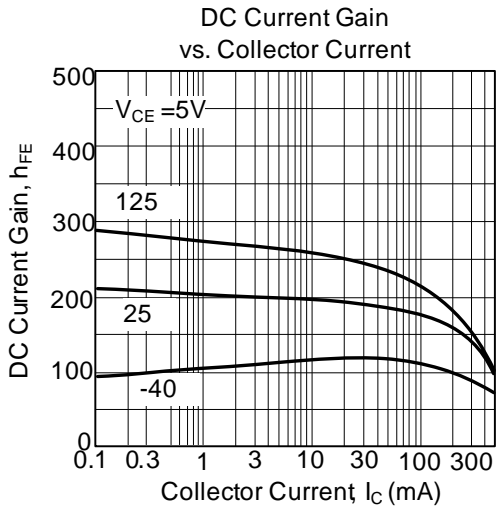
KZT2222A

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit	
Collector cutoff current	ICBO	IE = 0; VCB = 60 V			10	nA	
		IE = 0; VCB = 60 V; Tj = 125 °C			10	μA	
Emitter cutoff current	IEBO	IC = 0; VEB = 5 V			10	nA	
DC current gain	hFE	IC = 0.1 mA; VCE = 10 V	35				
		IC = 1 mA; VCE = 10 V	50				
		IC = 10 mA; VCE = 10 V	75				
		IC = 10 mA; VCE = 10 V; Ta = -55 °C	35				
		IC = 150 mA; VCE = 1 V *	50				
		IC = 150 mA; VCE = 10 V *	100		300		
		IC = 500 mA; VCE = 10 V *	40				
collector-emitter saturation voltage	VCEsat	IC = 150 mA; IB = 15 mA			300	mV	
		IC = 500 mA; IB = 50 mA			1	V	
base-emitter saturation voltage	VBEsat	IC = 150 mA; IB = 15 mA	0.6		1.2	V	
		IC = 500 mA; IB = 50 mA			2	V	
Collector capacitance	Cc	IE = iE = 0; VCB = 10 V; f = 1 MHz			8	pF	
Emitter capacitance	Ce	IC = iC = 0; VEB = 500 mV; f = 1 MHz			25	pF	
Turn-on time	ton	ICon = 150 mA; IBon = 15 mA; IBoff = -15 mA			35	ns	
Delay time	td				10	ns	
Rise time	tr					25	ns
Turn-off time	toff					250	ns
Storage time	ts					200	ns
Fall time	tf					60	ns
Transition frequency	fT	IC = 20 mA; VCE = 20 V; f = 100 MHz	300			MHz	

* Pulse test: $t_p \leq 300 \mu\text{s}$; $\delta \leq 0.02$.

■ TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS

